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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/708,897

03/30/2004

Bruce W. Tryon

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EXAMINER

BEHNCKE, CHRISTINE M

ART UNIT

PAPER NUMBER

3661

MAIL DATE

DELIVERY MODE

10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/708,897

Applicant(s)

TRYON, BRUCE W.

Examiner

Christine M. Behncke

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 1-11, 24-46 and 48-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-23 and 47 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/25/04 and 3/30/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the Amendment and Remarks filed 6 August 2007, in which claims 1-55 were presented for examination.

Claim Objections

Claim 12 is objected to because of the following informalities: the claim does not end with a period at line 11. Appropriate correction is required.

Election/Restrictions

Claims 12 and 47 are generic to the following disclosed patentably distinct species:

Species 1: drawn to controlling the fuel flow of a hybrid electric vehicle in anticipation of shutting down a recuperated turbine engine;

Species 2: drawn to monitoring a recuperated turbine engine, shutting off a fuel flow to the turbine engine, and resuming the fuel flow at a prior time to when a condition would indicate that the turbine engine would not likely start without requiring a source of energy external to the turbine engine;

Species 3: drawn to determining a location of the vehicle, a measure responsive to an amount of energy required for the reaching a destination, and reducing a power generated by a power generator response to the measure in advance of the vehicle reaching the destination;

Species 4: drawn to determining a likely destination of a vehicle;

Species 5: drawn to determining a likely second and third destination based upon driving patterns.

The species are independent or distinct because if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination of Species 4 and 5 have separate utility such as a navigation component of any type of vehicle, the invention does not require being used in a hybrid vehicle, to determine likely routing data for traffic presentation or routing presentation. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

During a telephone conversation with Kurt VanVoorhies (Reg. No. 38,643) on 2 October 2007 a provisional election was made without traverse to prosecute the invention of Species 3, **claims 12-23 and 47**. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-11, 24-46, and 48-55 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12-22 and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Vickers, US 2004/0204797.

(Claims 12 and 47) Vickers discloses a method and system of controlling a hybrid electric vehicle, wherein said hybrid vehicle incorporates a power generator (engine 12), an energy storage device (storage cell 16), wherein the hybrid vehicle is adapted to provide for selectively using power generated by the power generator to charge the energy storage device with stored energy ([0003]); a traction motor (motor 14), wherein the hybrid electric vehicle is adapted to provide for selectively operating the traction motor from power generator and/or power from a discharge of the stored energy from the energy storage device ([0004]); a vehicle location sensor, wherein the vehicle location sensor generates at least one measure of location of the vehicle (GPS 64); a computer adapted to execute a stored program (circuit 18); a memory operatively associated with the computer, wherein the stored program is adapted to record in the memory information related to a destination of the vehicle (memory 36, figure 2); and further comprising: determining at least one location of the vehicle (step 106, figure 3);

Art Unit: 3661

determining a measure responsive or related to an amount of energy required for said vehicle to reach a destination, wherein said measure is responsive to said at least one location of said vehicle in relation to said destination (step 108, [0025]); at least reducing the power generated by said power generator responsive to said measure in advance of said vehicle reaching said destination (steps 110 to 104,[0025]); and continuing travel of said vehicle to said destination using said traction motor powered at least by said energy storage device ([0025]).

(Claim 13) Vickers further discloses wherein said at least one location of the vehicle is determined with a vehicle location sensor in the vehicle ([0023]).

(Claim 14) Vickers further discloses wherein said vehicle location sensor comprises at least one of a GPS navigation system, an inertial navigation system, a dead reckoning navigation system, and a map matching navigation system ([0023]).

(Claim 15) Vickers further discloses wherein said destination is automatically determined responsive to a driving pattern of said vehicle inferred from said at least one location in view of information related to previously stored driving pattern for said vehicle ([0024]).

(Claim 16) Vickers further discloses wherein the measure is responsive to a distance of said vehicle to said destination along a predicted route to said destination ([0022], [0024]).

(Claim 17) Vickers further discloses wherein said measure is responsive to an estimate of energy required to reach said destination along a predicted route to said destination ([0025]-[0026]).

(Claim 18) Vickers further discloses wherein said measure is responsive to previously stored information corresponding to said at least one location of said vehicle for subsequent travel along a predicted route to said destination ([0024], trip history database 40).

(Claim 19) Vickers further discloses wherein said previously stored information is responsive to the energy that had been required during at least one previous trip to reach said destination along a predicted route to said destination ([0017], [0022]).

(Claim 20) Vickers further discloses wherein said previously stored information is responsive to an average of a plurality of previous trips from said at least one location of said vehicle to said destination along a predicted route to said destination ([0026]).

(Claim 21) Vickers further discloses wherein the operation of at least reducing the power generated by said power generator comprises decreasing a fuel flow to said power generator over time ([0018]).

(Claim 22) Vickers further discloses wherein the operation of at least reducing the power generated by said power generator comprises shutting off a fuel flow to said power generator ([0018]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vickers in view of Tamai et al., US 6,307,277.

Vickers discloses the method of controlling a hybrid electric vehicle as previously applied to claim 22, further Vickers discloses shutting off the fuel flow to the power generator, but does not disclose using at least a portion of power generated by the power generator to store energy in the energy storage device when the fuel flow is shut off. However, Tamai teaches a fuel control system for a hybrid electric vehicle with an engine, a traction motor, and energy storage devices (batteries 24, 26, 28), and wherein after the fuel flow is shut off to the power generator, the power generator generates power and using a portion of the power generated to store energy in the energy storage device (column 3, lines 18-65). It would have been obvious to one of ordinary skill in the art to combine the invention of Vickers with the teachings of Tamai because as Tamai suggests, it is advantageous and more efficient to use/store as much energy as possible rather than waste the excess energy, and the transition between the engine start and stop is made smoother with the arrangement (column 3, lines 1-40).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine M. Behncke whose telephone number is (571) 272-8103. The examiner can normally be reached on 8:30 am- 5pm.

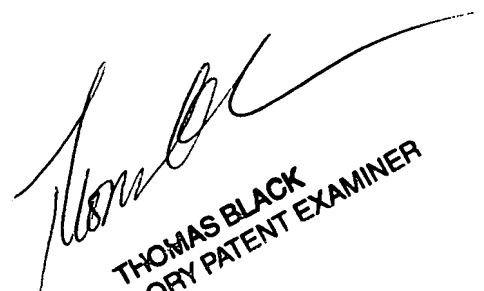
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone

Art Unit: 3661

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMB



THOMAS BLACK
SUPERVISORY PATENT EXAMINER